

**Amendments to the Claims:**

The following is a listing of the claims which replaces all prior versions and listings of claims in this application.

**Listing of Claims:**

1. (Currently Amended) A method of providing a signaling channel for performing one or more signaling functions at ~~an~~ the level of Ethernet level wherein telecommunication is organized by information packets forming an information flow, the method comprises utilizing a combined flow composed from said information flow and one or more service flows formed from service packets being compatible with said information packets, wherein the service packets belonging to a particular service flow carry indication of a corresponding one of said signaling functions to be performed, while said one or more service flows form the signaling channel at the ~~level of~~ Ethernet level.

2. (Currently Amended) A method according to Claim 1, for providing the signaling channel at the ~~level of~~ Ethernet level between a first and a second operating points in a network domain, said first and second operating point being referred to as the two basic operating points, the method comprising steps of:

- arranging at the first operating point a source adaptation element capable of receiving the information flow from a first Ethernet device,

- arranging at the second operating point a sink adaptation element capable of transmitting the information flow to a second Ethernet device,
- producing at the source adaptation element the service packets forming said one or more service flows,
- at the source adaptation element, merging said one or more service flows with the information flow, thereby obtaining the combined flow with the signaling channel,
- transmitting data comprised in the combined flow via the network domain from the source adaptation element to the sink adaptation element,
- at the sink adaptation- element, extracting the service packets of said one or more service flows from said combined flow and processing said service packets, thereby performing said one or more signaling functions.

3. (Currently Amended) The method according to Claim 2, wherein the step of producing the service packets forming said one or more service flows is performed at the source adaptation element based on at least one of the following two operations: monitoring the information flow and monitoring external instructions.

4. (original) The method according to Claim 1, wherein said service packets compatible with the information packets are suitable for multiplexing with one another.

5. (Currently Amended) The method according to Claim 2, further comprising arranging one or more monitoring points between the first and second ~~[[two]]~~ operating points.

6. (Currently Amended) The method according to Claim 2, comprising arranging between said ~~two, basic,~~ two basic operating points at least one additional operating point comprising one or more of an additional source adaptation element ~~and/or~~ and one or more of an additional sink adaptation element, thereby forming two or more signaling channels between said two basic operating points.

7. (Currently Amended) The method according to Claim 2, wherein a span of the network domain between said two basic operating points consists of segments which belong to Ethernet only, thereby enabling creation of the combined flow in a pure Ethernet environment.

8. (Currently Amended) The method according to Claim 2, wherein a span of the network domain between said two basic operating points comprises at least one segment ~~segment(s)~~ of a transport network, the method further comprises preserving said signaling channel during transmitting the combined flow via the transport network.

9. (Currently Amended) The method according to Claim 1, further comprising at least one step from the following list:

- mapping packets of the combined flow into frames of a transport network for transmitting said information and service packets via the transport network,
- de-mapping frames of a transport network incorporating said combined flow, for separating thereof from said frames, thereby preserving the signaling channel at the Ethernet level.

10. (Currently Amended) The method according to Claim 8, further comprising the following steps:

- mapping packets of the combined flow into frames of the transport network for transmitting said information and service packets via the transport network,
- de-mapping frames of the transport network incorporating said combined flow, for separating thereof from said frames and processing, thereby preserving the signaling channel at the Ethernet level.

11. (Currently Amended) The method according to Claim 1, wherein a service packet has a header, the method further comprising indicating ~~indication of~~ a particular signaling function in the header of a service packet of said service packets, and providing data on said particular signaling function in a ~~the~~ data field of the service packet.

12. (Currently Amended) The method according to Claim 1, wherein said one or more of the signaling functions are selected from at least the following ~~non-exhaustive list~~:

a plurality of performance monitoring functions including at least one Tandem

Connection function,

a one way and round trip delay measurement function,

a far end status function,

a connection integrity check function,

a buffer fill check function,

a function for enabling congestion indication and rate control.

13. (Currently Amended) A source adaptation element for creating a signaling channel for performing one or more signaling functions at an ~~the level of~~ Ethernet level, capable of:

- receiving the Ethernet information packets forming an information flow,
- producing one or more service flows of service packets compatible with said information packets, wherein the service packets belonging to a particular service flow carry indication of a specific signaling function to be performed, and
- composing from said information flow and said one or more service flows an outgoing combined flow with the signaling channel formed by said one or more service flows.

14. (Currently Amended) The source adaptation element according to Claim 13, wherein said one or more service flows are produced by a source function block based on monitoring at least one of the following two: the information flow and external instructions.

15. (Currently Amended) The source adaptation element according to Claim 13, further comprising a mapping unit for transmitting the outgoing combined flow via a transport network, thereby ensuring transmission of ~~said signaling channel~~ via the transport network.

16. (Currently Amended) A sink adaptation element for terminating a signaling channel intended for performing one or more signaling functions at ~~an the level of~~ Ethernet level, the sink adaptation element is capable of:

- receiving an incoming combined flow composed from an information flow of Ethernet packets and one or more service flows formed from service packets compatible with the information packets,
- separating from said combined flow the one or more service flows and analyzing thereof to perform said signaling functions respectively assigned to said service flows.

17. (Currently Amended) The sink adaptation element according to Claim 16, further provided with a de-mapping block capable of obtaining said incoming combined flow from frames of a transport network which envelope the combined flow, thereby ensuring receiving the signaling channel via the transport network and analyzing thereof at the Ethernet level.

18. (Currently Amended) An assembly for creating a first signaling channel and for analyzing a second signaling channel, both first and second signaling channels intended

for performing one or more signaling functions at the ~~level of Ethernet~~ level, the assembly comprising a source adaptation element and a sink adaptation element, wherein:

the source adaptation element is for creating the first signaling channel and is capable of

- receiving Ethernet information packets forming an information flow,
- producing one or more service flows of service packets compatible with said information packets, wherein the service packets belonging to a particular service flow carry indication of a specific signaling function to be performed, and
- composing from said information flow and said one or more service flows an outgoing combined flow with the signaling channel formed by said one or more service flows;

the sink adaptation element for terminating the second signaling channel being capable of

- receiving an incoming combined flow composed from information flow of Ethernet packets and one or more service flows formed from service packets compatible with the information packets,
- separating from said incoming combined flow the one or more service flows and analyzing thereof to perform said signaling functions respectively assigned to said service flows.

19. (original) A system for providing a signaling channel for performing one or more signaling functions at the ~~level of Ethernet~~ level in any network domain comprising Ethernet, capable of performing the method according to Claim 1.

20. (Currently Amended) A system for providing a signaling channel for performing one or more signaling functions at the ~~level of Ethernet~~ level , utilizing the assembly according to Claim 18, wherein the first signaling channel and the second signaling ~~signalling~~ channel are ~~one and~~ the same signaling channel.

21. (Previously Presented) A method for providing a signaling channel for performing one or more signaling functions at ~~an the level of Ethernet~~ level wherein telecommunication is organized by information packets forming an information flow, the method comprises

utilizing a combined flow composed from said information flow and one or more service flows formed from service packets being compatible with said information packets, wherein said one or more service flows form the signaling channel at the ~~level of Ethernet~~ level, the service packets belonging to a particular service flow carry indication of a corresponding one of said signaling functions to be performed, and wherein said one or more of the signaling functions enable achieving at least one of the following objectives:

performance monitoring,

far end status indication, including remote failure indication,

remote loopback, including one way and round trip delay measurement,

link monitoring, including connection integrity check,

buffer fill check,

congestion indication and



Appln. S/N 10/090,791  
Amendment filed July 26, 2006  
Response Office Action of April 26, 2006

Attorney Reference 82381

rate control.